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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/910,117	07/20/2001	Takanori Saeki	NEC G226	1670

7590 05/22/2002  
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EXAMINER

NGUYEN, LINH M

ART UNIT PAPER NUMBER

2816

DATE MAILED: 05/22/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

<b>Application No.</b> 09/910,117	<b>Applicant(s)</b> SAEKI, TAKANORI	
<b>Examiner</b> Linh M. Nguyen	<b>Art Unit</b> 2816	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1)  Responsive to communication(s) filed on 27 March 2002.
- 2a)  This action is FINAL.
- 2b)  This action is non-final.
- 3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4)  Claim(s) 1-37 is/are pending in the application.
  - 4a) Of the above claim(s) 2-27,30,32,36 and 37 is/are withdrawn from consideration.
- 5)  Claim(s) \_\_\_\_\_ is/are allowed.
- 6)  Claim(s) 1,28,29 and 31 is/are rejected.
- 7)  Claim(s) 33-35 is/are objected to.
- 8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9)  The specification is objected to by the Examiner.
- 10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.
  - Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11)  The proposed drawing correction filed on \_\_\_\_\_ is: a)  approved b)  disapproved by the Examiner.
  - If approved, corrected drawings are required in reply to this Office action.
- 12)  The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a)  All b)  Some \* c)  None of:
    - 1.  Certified copies of the priority documents have been received.
    - 2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    - 3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
  - \* See the attached detailed Office action for a list of the certified copies not received.
- 14)  Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
  - a)  The translation of the foreign language provisional application has been received.
- 15)  Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1)  Notice of References Cited (PTO-892)
- 2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3)  Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4)  Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_.
- 5)  Notice of Informal Patent Application (PTO-152)
- 6)  Other:

Art Unit: 2816

### **DETAILED ACTION**

This is a reply to the Applicant's response to the restriction/election submitted on 3/27/2002, upon which claims 1, 28-29, 31, and 33-35 are elected. However, because Applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

#### ***Priority***

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

#### ***Drawings***

The drawings are objected to because of misspelled reference character in Figure 27:

Change "CHANGE PUMP" (in box 320) to --CHARGE PUMP--.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

#### ***Claims Objected, minor informalities***

Claims 34-35 are objected to because of the following informalities:

Claims 34 and 35, lines 10, change "an" to --a--.

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1, 28, and 31 are rejected under 35 U.S.C. 102(e) as being anticipated by Shieh et al. (U.S. Patent No. 6,323,705).

With respect to claims 1 and 28, Shieh et al. discloses, in Figures 2 and 4, a clock control circuit and a corresponding control method comprising means for generating and outputting an output clock having a phase relative to a reference clock [CLKIN] by adding or subtracting to or from the phase by a predetermined unit value of a phase differential on each clock period of the reference clock, which is an input clock or a clock derived from the input clock.

With respect to claim 31, Shieh et al. discloses, in Figures 2 and 4, that the unit phase difference is variably set by a control signal [Q].

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shieh et al. (U.S. Patent No. 6,323,705) in view of Tanis et al. (U.S. Patent No. 5,258,724).

With respect to claim 29, Shieh et al. discloses all of the claimed limitations, as expressly recited in claim 28, except for specifying that the output clock of a frequency corresponding to a non-integer frequency with respect to the frequency of the reference clock can be outputted. Tanis et al. discloses, in figure 2, a fractional division synthesizer comprising a fractional (or non-integer) divider, which is inherently capable of outputting the output clock of a frequency corresponding to a non-integer frequency with respect to the frequency of the reference clock. To implement a fractional divider fed with the input (reference) clock or the output clock of the circuit of Shieh et al. to obtain high frequency resolution would have been obvious to one of ordinary skills in the art at the time of the invention since such a configuration would provide finer resolution than integer dividers, which has been a well-known practice in the art as evidenced by the teachings of Tanis et al..

***Allowabl Subject Matter***

Claim 33 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 33-35 would be allowed if being corrected to overcome the objections set forth in this Office Action.

Prior art of record does not show or fairly suggest (1) a clock control method comprising (a) phase-adjusting the output clock by an interpolator for outputting a signal whose propagation delay corresponds to division of timing difference of two clock signals to vary ratio of internal division of timing difference of the interpolator to enable outputting of an output clock of a non-integer frequency of the input clock frequency, as called for in claim 33, and (2) a circuit that (a) receives an input clock, and (b) generates an output clock with a phase relative to a reference clock being changed on each cycle of the output clock, wherein (b1) the reference clock is the input clock or a clock derived from the input clock, (b2) a phase of the output clock relative to the reference clock for another cycle next to one cycle is produced by adding to or subtracting the phase of the output clock corresponding the cycle a unit phase differential value  $\Delta\phi$ , (b3) the  $\Delta\phi$  is a predetermined value such that  $n\Delta\phi$  is equal to one clock period ( $t_{CK}$ ) of the reference clock while  $n$  is an positive integer, and (b4) a frequency of the output clock is  $1/(t_{CK}+\Delta\phi)$ , as called for in claims 34 and 35.

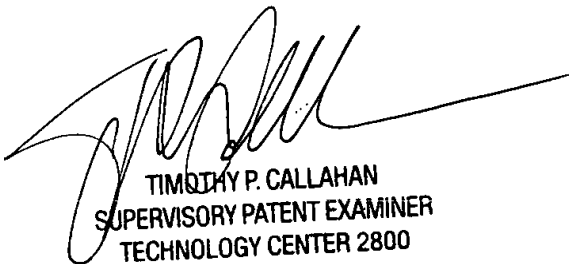
***Inquiry***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Linh M. Nguyen whose telephone number is (703) 305-0414. The examiner can normally be reached on Alternate Mon, Tuesday - Friday from 7:30 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Callahan can be reached on (703) 308-4876. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Linh M. Nguyen



TIMOTHY P. CALLAHAN  
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